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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/796,366

03/08/2004

David Freker

42P18653

2247

8791 7590 01/31/2007  
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EXAMINER

DU, THUAN N

ART UNIT

PAPER NUMBER

2116

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/31/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/796,366

Applicant(s)

FREKER ET AL.

Examiner

Thuan N. Du

Art Unit

2116

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. It is hereby acknowledged that the following papers have been received and placed of record in the file: Amendment (dated 11/6/06).
2. Claims 1-22 are presented for examination.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. The rejections are respectfully maintained and reproduced infra for applicant's convenience

#### ***Claim Objections***

5. Claim 1 is objected to because of the following informalities: "An memory controller" should be -- A memory controller --. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 103***

6. Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admission of prior art [AAPA] in view of Johnson (U.S. Patent No. 5,661,751).
7. Regarding claims 1, 11-13, 15, 17-22, AAPA teaches a memory controller comprising a memory enable deassertion logic for deasserting a memory enable signal to the memory [application's specification, p. 1, ll. 6 of par. 0003], the memory enable signal is used for reading and writing operation [application's specification, par. 0002]. AAPA does not teach that the deassertion can be delayed for a period of time after completion of a memory operation.

Johnson teaches a power management system comprising a clock control unit (102) for asserting and deasserting a clock enable signal (138) [Fig. 1; col. 5, lines 5-30], wherein the deassertion of the clock enable signal can be delayed by a period of time after completion of an operation (activity detection) [col. 5, lines 46-58], the delay period chosen for a preferred latency versus power savings tradeoff [col. 5, lines 26-30].

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of AAPA so that the deassertion of the clock enable signal can be delayed by a period of time after completion of an operation as taught by Johnson because it would allow the system to maintain the clock to the memory when desired.

8. Regarding claims 2, 16, AAPA teaches that the memory comprises double data rate (DDR) dynamic random access memory (DRAM) [application's specification, par. 0002].

9. Regarding claim 3, one of ordinary skill in the art would have recognized that each setting could be different from the other.

10. Regarding claims 4-6, 14, Johnson teaches that the system including a counter [Fig. 2].

11. Regarding claims 7-10, since they recite method of operating of the apparatus defined in the apparatus claims, they are rejected accordingly based on the rejection of the apparatus claims.

#### ***Response to Arguments***

12. Applicant's arguments filed November 06, 2006 have been fully considered but they are not persuasive.

Applicant is hereby noticed that claim 1 has not been amended to correct the deficiency stated in the last office action.

In response to applicant's argument that AAPA does not teach or suggest a memory controller comprising memory enable deassertion logic for deasserting a memory enable signal to the memory, examiner respectfully disagrees. AAPA teaches that the memory enable signal is asserted/deasserted [p. 1, 0003]. If AAPA's system does not include any controller or logic to control the assertion/deassertion of said memory enable signal, the memory enable signal cannot be asserted/deasserted. Therefore, AAPA, inherently, including a control logic for controlling the assertion/deassertion as claimed.

In response to applicant's argument that Johnson is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the deassertion of the clock enable signal, taught by Johnson, is delayed by a predetermined amount of time was relied upon to reject the claimed limitation.

In response to applicant's argument that Johnson does not teach or suggest a wait period is chosen for preferred latency versus power savings tradeoff, examiner respectfully disagrees. One of ordinary skill in the art would have recognized that the predetermined wait time taught by Johnson is set by a user and/or a programmer. When more wait time is added, the system consumes more power and vice versa. Therefore, Johnson teaches a wait period is chosen for preferred latency versus power savings tradeoff as claimed.

***Conclusion***

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuan N. Du whose telephone number is (571) 272-3673. The examiner can normally be reached on Monday-Friday: 9:30 AM - 6:00 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rehana Perveen can be reached at (571) 272-3676.

Central TC telephone number is (571) 272-2100.

The fax number for the organization is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 2116

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

TD  
January 24, 2007

A handwritten signature in black ink, appearing to read 'Thuan N. Du', written in a cursive style.

**THUAN N. DU**  
**PRIMARY EXAMINER**